Future Voters
DISCUSSION GUIDE
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WHAT SHALL WE DO ABOUT OUR HIGHWAYS, STREETS, AND ROADS?

Drawings by Stuart Judd, Jr.

If every one of us, during the holiday season, had taken to the highways for a Christmas visit, there would have been cars, buses, and trucks enough for all of America's one hundred and sixty-two million inhabitants to get into without crowding. There's one motor vehicle today for every three of us.

The real problem would be: *could we get to where we wanted to go?*

It's our haphazard network of highways and streets which has fallen far behind what the traffic of the automotive age urgently calls for.

Some of our roads date back to ox cart and covered wagon days. They twisted and turned to dodge swamps, hills, and other natural obstacles—and the turns and twists still delay us today.

Mud holes were a major menace in the horse and buggy age.

Plenty of dust was raised in 1892 when Charles and Frank Duryea drove the first horseless buggy, powered by gasoline, along the streets of Springfield, Massachusetts. But it wasn't until 1908, when mass production got going with the Model T, that the era of transportation by motor vehicles began, calling for a broad new conception of highways, streets, and roads.

In 1919, the mule power age for the army ended. A test convoy of gasoline-fueled military vehicles left Washington, D. C., on July 7, bound for the West Coast. It managed to roll into San Francisco sixty days and six thousand breakdowns later. The young lieutenant sent along as observer was Dwight D. Eisenhower.

Ever since the motor vehicle age started, we've been trying to keep pace with the expanding situation.

During World War II, because construction and repairs were postponed, we began falling behind. Catching up has become a big part of the job.

Churned over by an increasing flood of traffic which fills many a thoroughfare to the bursting point, our highway system in general has been wearing out faster than it is being replaced. Congestion, with its crumpled fenders and waste of time, tempers, and gas, is just one of the more noticeable evils which demand that something further be done to get rid of them. And what about that accident rate which claims as many casualties* yearly as a good-sized war?

Ideally what we're looking for is an efficient, rapid flow of vehicles able to reach at minimum risk the places where the drivers want to go.

Many indications, including President Eisenhower's remarks in his State of the Union message to the 84th Congress, point to the probability that something really big is in the works to give the country better highways, streets, and roads. Almost every state is in the midst of a sizeable highway construction program—either in the planning stage or already begun.

To help us organize our thinking on the subject and form our opinions as to what's needed and how to handle the needs, let's turn over the page.

**U. S. battle deaths during the entire Korean War (June 25, 1950 to July 27, 1953) totalled 25,604. Americans killed in traffic accidents during the one year 1953 numbered 38,300 persons.*

WHAT WE'VE GOT

First, we might look at what we've got.

Including every dirt road and dead end street, the nation has some three million, three hundred thousand miles of public ways.

Most important, from the national point of view, are the highways which make up the numbered system of U. S. roads. Some, like 1, which runs from Fort Kent, Maine, to Key West, Florida, or 101, from Olympia in the State of Washington to the Mexican border, San Ysidro, California, or 30, from Atlantic City, New Jersey, to Astoria, Oregon, are well-known to many of us because we've travelled along

parts of them. They form the federal aid network, with the Federal Government sharing with the states on a fifty-fifty basis the costs of maintenance and building. They total only about 40,000 miles, but that's enough mileage to link into the U. S. road system all the biggest cities and many of the next in size. Other roads—about 80% of the nation's total—are built and maintained directly by the states, counties, towns, boroughs, or cities through which they run.

Highway building and maintenance in the U.S.A. is mostly a state and local community affair—with cities, towns, and other political divisions seeking some financial aid from the state for their own streets and roads, and often getting it.

Modern roads cost plenty of money. Cities and towns try to raise what they need chiefly through taxes on property. States mostly rely on car and driver license fees, and—best revenue getter of all—on a gas tax which averages about five cents a gallon. So easy a money maker is this gas tax that some states use the revenue not just for roads but to help meet other expenses. What is the practice in our state? Do we, or do we not, approve of using gas tax revenue for purposes other than paying expenses directly connected with the state's highway system?

As for federal road funds, some come directly from the Treasury to take care of appropriations by Congress; some come from the federal gas tax of two cents a gallon. Up to the passage by the 83d Congress of the current federal aid roads bill, this money, too, was subject to diversion for

other purposes. The 1954 Act provides that all federal gas tax money is to be used entirely for highway construction and improvement. What are our views as to that?

The 1954 federal aid highway bill of about a billion dollars a year is the biggest amount Congress has ever voted for the purpose.†

In addition to this bill, which goes into effect July 1, 1955—the start of the U. S. fiscal year‡—President Eisenhower has a special proposal. It was first made on July 12, 1954, at the annual conference of the Governors of the forty-eight states. The four points of the President's ten year program suggest:

1. An over-all plan for a system which would take into account (a) the problem of speedy, safe, transcontinental travel, (b) intercity communication, (c) easy access to highways, including those along which the produce of farms moves to urban communities, (d) metropolitan area congestion (bottlenecks and parking).
2. Figuring out ways to finance what needs to be done.
3. A cooperative alliance between the Federal Government and the states, based on the idea that local government should be manager of its own area.
4. Modernization of the U. S. interstate highway system, with the Federal Government's role consisting of financial aid and help in producing a coordinated plan. The Government would probably be empowered, for example, to advance funds or guarantee the obligations of localities or states undertaking the construction of new highways or the modernization of those already existing.

The central purpose of the President's program is to insure a road network by 1970 which would be capable of meeting the transportation needs—including defense—of the nation's estimated 200 million citizens.

Costs of this program would be over and above what the regular roads appropriation bill already passed will provide. No public works proposal of such magnitude has ever before been suggested. First estimates ran to 50 billion, since pared down to 24, subject, of course, to revision upwards or downwards when bills embodying administration and other proposals are debated by the 84th Congress.

These we should watch for, think about, and discuss.

TOLL ROADS

Getting money even for such a useful purpose as better roads is always a problem. That's why the toll road idea claims interested attention. It is less painful to plan a toll road which will pay for itself than to build a free road out of hard-to-raise taxes.

The toll road idea is nothing new. Turnpikes were common 100 years ago throughout the Eastern states. Even that early, transportation needs were outgrowing the town-built wagon roads of the day. So private enterprise, with practically no public regulation and in a pretty hit or miss fashion, laid out turnpikes and charged what the traffic would bear. After an early profitable start, miscalculations and exorbitant tolls put most of the original pikes out of business.

The modern trend is founded on a far more practical, efficient, and carefully planned and regulated basis.

In the first place, toll roads today are mostly managed by "Authorities"—semi-public bodies set up by state legislatures and charged with the job of planning and running the pike. Their members are customarily appointed by the Governor, and for fairly long terms. The Authority hires different sets of engineers to figure building costs and expected volume of traffic. Returns from tolls and from such concessions as gas stations and restaurants are carefully calculated. These studies are then used to determine the size and nature of the bond issue that's needed. Turnpike bonds, which are tax-exempt and carry a moderate rate of interest, are usually bought by institutions like banks and insurance companies. Cash from their sale becomes immediately available so that construction can start at once, while the principal won't have to be paid back till years later when the bonds become due. The expiration date is carefully calculated on the estimated earning capacity of the pike.

As for the pikes themselves, the whole idea is to have them as safe, swift, and convenient as possible so that people will wish to use them.

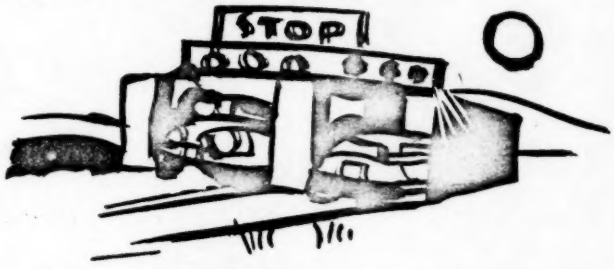
‡*Seven hundred million dollars is to go annually to states on a matching fifty-fifty basis to help maintain or build roads not a part of the U. S. interstate highway system. One hundred and seventy-five million goes to the improvement and expansion of the U. S. interstate highway network. Eighty-one million goes for miscellaneous highway purposes, like building and keeping up roads in the national parks.*

†See the Current Guide on making the national budget (Vol. II, No. 6).

Here are a few of the more famous ones already in operation:

Pennsylvania Turnpike. This is the first of the modern turnpikes. It was thought of back in 1935, as a depression-time work project for people out of jobs. But after the State Legislature set up a Turnpike Commission or "Authority", no one showed any inclination to buy the bonds. It was at this point that the Federal Government stepped in with W.P.A. and R.F.C. funds§ to give the Pennsylvania Turnpike its starting push. The four-lane divided highway, opened in 1940 between Harrisburg and Pittsburgh, with its easy grades, its seven tunnels through steep mountains, and with crossroads completely eliminated, proved not only popular but profitable. It offered a direct route at 65 to 70 miles an hour to take the place of what before had been a long and tedious journey. Its two and one quarter percent, 276 million, bond issue became a desirable investment. Since its opening, the Pennsylvania Turnpike has already earned more than 80 million dollars. These earnings indicate it will be able to pay off the bonds on its original 327 miles by 1965, instead of 1988 as originally scheduled. During the fiscal year which ended May 31, 1954, the pike had been used by 11,690,442 vehicles—an increase of 3.4% over the previous year.

Merritt and Wilbur Cross Parkways, Connecticut. Here the system differs a bit from that on turnpikes in most other states. In place of creating an "Authority", the state of Connecticut itself, through its highway department, directly owns and operates its toll roads. There are other differences, too. Instead of having toll booths at all points of egress and ingress, a good number are skipped, permitting local traffic, making short trips, to enter and leave the turnpike without toll.



Financed, like other turnpikes, by bond issues, the idea was to pay these off as soon as the parkways had paid for themselves. But the state legislature, seeing an opportunity to get funds for construction and maintenance of other roads, has passed a law permitting the state to go on collecting tolls for revenue after the bonds are paid off.

What are our views on Connecticut's system?

New York State Thruway. For the present and as far as it has gone, this is the longest toll highway in operation. Even so, not all its 427 miles of four and sometimes six-lane surface between Buffalo and New York City have been completed. When branches for easy access from other neighborhoods are added, it will total 564 miles, with 500 overpasses and bridges, including a three mile crossing of the Hudson River—all at a cost of close to a billion dollars.

Thruway traffic engineers figure that a passenger car averaging 50 miles per hour on the crossingless stoplightless route, with curves at a minimum and no grades exceeding 3%, can cut one hour and forty-five minutes from the present driving time between New York City and Buffalo. Since about 85% of the State's entire population live within twenty miles of some part of the route which cuts close to all major industrial areas and cities, New York's new Thruway seems destined to render plenty of service.

Others. West Virginia's toll road, nearing completion, follows a straight line across rugged country where other roads have to twist and turn. A marvel of engineering, it goes through, over, and under mountains. Builders have called it "the toughest road job east of the Rockies."

The New Jersey Turnpike, serving 22 million vehicles a year, can claim to be the most popular road in history. Its spectacular success has done much to turn attention to toll roads as one solution for the nation's highway traffic problems. By 1957, toll roads already built or under construction will provide a limited access, multiple lane, divided expressway between New York and Chicago via the turnpikes of New Jersey, Pennsylvania, Ohio, Indiana and Illinois.

And there's already a five state• committee studying how to build a 1,450 mile toll expressway between Chicago and Miami, Florida, requiring bond issues of a billion and a half. Each state (following the general practice) would handle its own financing, construction, and maintenance, and would operate the section within its borders.

Toll roads are turning out to be a marvelous way to get good roads fast. But they raise headaches, too. It looks as if they can only be built where the traffic warrants it—otherwise bonds won't sell.

Then there are the arguments against the whole toll road idea:

(1) The chief opposition can be stated this way. A driver who uses a toll road pays about one cent a mile for the privilege. If, instead of taking tolls, the state taxes him fifteen cents extra per gallon for gas, his costs would be about the same. So why not up the gas tax and build free roads and super highways for everybody?

(2) Another question that's raised is: What happens to people's businesses, especially the retail trade, if a super highway (toll or free) goes through a district and draws off traffic?

(3) Here's another to consider: How about condemnation of land for rights-of-way for thruways which bisect farmlands, making it impossible for a farmer to drive his equipment to a large part of his farm? Or how about other similar hardships?

What do we think about each of these objections? What others occur to us, and what are our views?

OVER-ALL PROBLEMS

Urban Traffic. Traffic is several things. It is vehicles. And it is the people who drive them. Closely connected with people are the ways they act and how and where they work and live.

One of the very biggest problems of traffic is what to do about it in cities. For the smaller number of drivers who wish to go through a town, by-passes or express causeways△ are a pretty good solution. But when motorists head for the city, surveys show that about 80% of them want to get into the heart of town and park. Trying to do just that, under conditions not made to take care of the situation, causes plenty of trouble. The city's two biggest traffic problems are bottlenecks getting into and out of towns, and no place to park. Also, especially in the already clogged downtown districts, there's the problem of big trailer trucks loading and unloading.

Politics and lack of cash are two reasons why cities, when they try to solve their traffic difficulties, are on the spot. Even if they do find ways to raise enough money, politics are apt to jump in and foul up the situation.

It's long been the practice for state and federal highway appropriation bills to short change the cities—but indications are beginning to point to a shift in attitude. As for politics, some sort of Authority, free of political pressure, is a solution that's gaining favor in many big cities.

For the parking problem itself, various remedies are being tried out or proposed. Pittsburgh, for example, through its Parking Authority is finishing two downtown garages to get three thousand cars off the streets. There's also to be an underground parking area with cars stacked five levels deep. Pittsburgh's new zoning ordinance is requiring that when new buildings are built, they must furnish off-street parking and loading space.

One plan suggested by traffic experts calls for a circle of big parking lots around a town, like beads on a necklace. The necklace itself represents part of the city's by-pass expressway system. Downtown, there'd be no parking at all, except for very special reasons. Instead, people would leave their cars at the parking places and enter buses waiting to take them quickly to where they are heading. Obviously, one bus with twenty or more people aboard takes up far less room than ten cars with two persons apiece. What are our views on this suggestion, and why do we feel as we do?

Los Angeles, with two million inhabitants and an area of 453 square miles, furnishes a spectacular example of what's happening in one city by way of trying to solve what used to be one of the world's wildest traffic tangles. Key of the plan will be a 165 mile system of metropolitan highways, known as freeways, which will permit motorists efficiently and rapidly to dart over or under congested areas.

§To start construction, the Federal Government Works Progress Administration, created to make jobs for the needy and unemployed, told the Turnpike Commission it would provide and pay for 45% of the work. Then the Federal Government's Reconstruction Finance Corporation came in with a 55% loan to take care of the rest. Later the sale of bonds cleared up this debt.

•Indiana, Kentucky, Tennessee, Georgia, Florida.

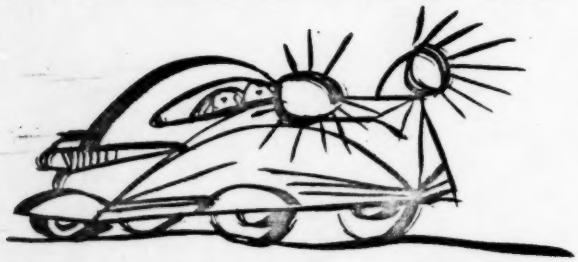
△Because property values are so high condemnation of land for city thruways piles up enormous expense. As one highway engineer remarked: "You might as well gold-plate them and do it right."

Already completed is "The Stack," an astonishing four level job that sends the motorist smoothly on his way—provided he keeps his eye peeled and misses no signs marking the turnoffs he is seeking. Over The Stack's two upper levels outbound and inbound traffic moves smoothly at 55 miles an hour. Traffic on the next two decks, with their turnoffs, travels at only slightly less speed. Thanks to The Stack, thirty-two lanes of traffic, without a single stoplight to slow things up, unscramble what used to be an intolerable congestion, and permit 250,000 vehicles daily to flow in any one of the eight directions in which their drivers may choose to go.

This enormously expensive project is on a strictly pay-as-you-go basis—not by tolls, but from state gas tax and other revenue from vehicle users as it gathers in the till. This all came about because in 1937 California's legislature, concluding that the cities could not handle necessary construction and financing by themselves, decided to help substantially with the cost and turned the building job over to state highway engineers.

SAFETY AND EFFICIENCY

One thing that must be borne in mind, when considering both traffic safety and efficiency, is the obvious fact that it is people who drive motor vehicles. People must adjust themselves to the machine age that moves on rubber wheels. And the machine age, here represented by the vehicles and the roads they run on, must adjust itself to the characteristics—natural and acquired—of people. For people, that means education. For roads and machines, it means efficient engineering.



Education doesn't mean merely traffic laws and enforcement. It means helping the driving public to improve its skill and learn to adapt itself to modern driving conditions. It means cultivating a cooperative driving attitude. It means public acceptance of safety measures. People must learn they'll travel safer and quicker—within legal limits of speed—if they outgrow and avoid dangerous habits on the road: bumper-to-bumper driving, or hovering over the left hind wheel of a vehicle they're thinking of passing; drunken driving; switching from lane to lane; not keeping to the right on express highways except for passing; making U turns, especially over the median strip; driving with faulty lights or brakes; excessive speed, or, on expressways, speeds of less than 35 miles an hour.

How may driver education best be achieved?

As for engineering, if it doesn't take into account the nature of people, it misses out. It must play ball with what people are and want. Most want to get to their destination as quickly and safely as possible. Roads of all types need to be planned and built with these wishes in view.

On the New Jersey Turnpike, it was found that scientifically planned law enforcement, which included taking into account the human factor, was a big help in reducing fatalities. As to accidents themselves, modern highway engineering is cutting the proportions down. A survey in California shows that your chances of getting there undamaged are four times better on a modern limited-access thruway than on an old-fashioned stop-and-go highway or road.

THE FUTURE

A look into the future is always interesting—though no one can be sure of the answers.

In the program for better roads that lies ahead, practically every community will be affected, and the nation's rural regions as well. Perhaps the biggest impact will come in the cities. Old-fashioned city streets, unless something is done, simply can't cope with the automotive age. A large proportion of American communities is strangling from motor vehicle congestion. Already this situation is causing the decentralization of cities. Suburbs, shopping centers, and factories are springing up within easy access of expressways. Some experts maintain that big cities, as we know them, will become a thing of the past. As for the expressways themselves, the tendency is towards broad rights of way, permitting control of wide strips of roadside land for easy access and other planned uses.

Though, as in the past, the great bulk of road maintenance and construction will in all likelihood continue to go into tax supported roads, toll roads—now representing only a very small fraction of our total mileage—seem destined in the next ten years to grow like Jack's beanstalk, eventually linking together the entire nation.

Either through toll roads or free, the efficiency of the national network connecting every village and town seems destined for major improvement.

One thing is pretty certain. Transportation delays cut into the American productive efficiency in which we take pride. Giving traffic the best chance to flow freely can be of the very greatest importance to the welfare of the nation—to its future growth and development, to its security and safety, and to its enjoyment and prosperity.

Here are a few more questions to think about or discuss:

How much of a part should local government play in a national better roads program? How much should the Federal Government? What reasons have we for our conclusions?

Should or should not states pay a larger share of the costs in solving city traffic problems?

Should Authorities, or the State's Highways Department, run turnpikes? What are our reasons pro and con?

Should or should not the Federal Government help in the building of toll roads by guaranteeing the bonds issued to finance them? What can be said in favor of such a policy? What against?

Should or should not special measures be taken about trucks, such as highways or lanes restricted exclusively to their use?

The editors are indebted to the late Theodore M. Matson, Director of the Bureau of Highway Traffic, Yale University, for suggestions and advice in the preparation of this Guide. Mr. Matson's untimely death on December 15, 1954, after a brief illness, is a serious loss to the cause of highway traffic research and planning.

Coming: More Guides on questions facing Congress.